

Notice of Allowability

Application No.

10/579,393

Examiner

MARYAM MONSHIPOURI

Applicant(s)

NORDLUND ET AL.

Art Unit

1656

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/21/10.
2. ☒ The allowed claim(s) is/are 47-52, 55-67.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>1/31/11</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

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An **Examiner's Amendment** to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this Examiner's Amendment was given in a telephone interview with Mr. H. James Voeller , on 2/3/2011.

Examiner's Amendment to the Claims

Cancel claim 53.

In claim 47, line 3, after "selected " insert --- from the group consisting of ----.

In claim 47, line 15, after "acid" delete "of".

In claim 55, line 2, after "avidin of claim " delete "53" and substitute therefor --- 47 ---.

In claim 53, line 6, after "as referenced by" insert --- the mature chicken avidin amino acid residue numbering of SEQ ID NO:1 ----.

Examiner's Amendments to the Specification

In page 1, underneath the title insert the following:

--- This application is the National Stage entry of PCT/FI2004/000679, filed 11/15/2004, which claims foreign priority to Finnish application 20031663, filed 11/14/2003. ---.

In page 6, bottom paragraph, delete " Figure 9. The" and substitute therefor --- Figures 9(A-C) show the ---.

The following is an **Examiner's Statement of Reasons for Allowance**:

Claims 47-52, and 55-67 are directed to a dual-chain avidin (dcAvd) comprising a fusion of two circularly permuted avidin monomers (cpAvd), the avidin monomers selected from: a circularly permuted avidin monomer comprising a new N-terminus that is before β -strand 5 and a new C-terminus that is after β -strand 4; a circularly permuted avidin monomer comprising a new N-terminus that is before β -strand 6 and a new C-terminus that is after β -strand 5; or a circularly permuted avidin monomer comprising a new N-terminus that is before β -strand 4 and a new C-terminus that is after β -strand 3, wherein in the cpAvd, the original C-terminal amino acid and the original N-terminal amino acid are joined directly or via a linker, thus creating the new C-terminus and the new N-terminus, and the dual-chain avidin (dcAvd) binds biotin or another ligand, as well as specifically claimed mutants of said dual-chain avidin, Pseudo-tetramers of said dual-chain avidin (dcAvd), a single chain avidin (scAvd) comprising the two dcAvd molecules fused together to form a single polypeptide, an isolated polynucleotide encoding said dcAvd, host cells comprising said polynucleotide and a method of expressing said dcAvd encoding polynucleotide.

Claimed dcAvd is free of prior art. Further, the prior art fails to suggest such specifically claimed product. Hence, said product is also non-obvious. Since said product is both novel and non-obvious, specifically claimed mutants thereof, pseudo-tetramers and, and single chain avidins comprising said dcAvd, polynucleotides encoding said dcAvd, host cells comprising said polynucleotide and methods of expressing said polynucleotide are also novel and non-obvious.

Claims 47-52, and 55-67 are allowed.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARYAM MONSHIPOURI whose telephone number is (571)272-0932. The examiner can normally be reached on Tues.-Fri., from 7:00 a.m to 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rao Munjunath can be reached on (571) 272-0939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Maryam Monshipouri/

Primary Examiner, Art Unit 1656

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